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PRE-APPEAL BRIEF REQUEST FOR REVIEW

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Docket Number: 2166-206 (16507)	
Application No.: 10/631,191	Filed: 7/31/2003
First Named Inventor: Joseph E. Foster	
Art Unit: 3751	Examiner: Huyen D. Le

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).
Note: No more than five (5) pages may be provided.

I am the

☐ applicant/inventor.

/Mark L. Mollon/
Signature

☐ assignee of record of the entire interest.
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)

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November 7, 2005
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NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

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This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U. S. Patent and Trademark Office, U. S. Department of Commerce, P. O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Mail Stop AF, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450.**

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Joseph E. Foster	Group Art Unit: 3751
Serial No.: 10/631,191	Confirmation No.: 2189
Filed: 7/31/2003	Examiner: Huyen D. Le
For: Deformed O-Ring Face Seal For Pneumatic Valves	Attorney Docket: 2166-206(16507)

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REMARKS ACCOMPANYING PRE-APPEAL BRIEF REQUEST FOR REVIEW

Honorable Sir:

Pursuant to the procedure specified in the Notice published in the Official Gazette on July 12, 2005, review by a pre-appeal brief conference is requested for the following reasons.

I. Clear Error in Rejection under 35 USC 102(b)

Claims 1, 2, 4-6, and 11-17 stand rejected under 35 USC 102(b) as being anticipated by Wilson (US 1,627,299). The final rejection contains clear errors in that claimed limitations are clearly not met. Since the conclusions reached in the final rejection are contrary to the clear teachings of Wilson, the application is not in condition for consideration by the Board of Appeals.

As explained on page 6 of the amendment filed June 2, 2005, claim 1 is directed to a valve assembly wherein a cavity is sunk into one face surface of first and second face surfaces and wherein an O-ring is inserted into the cavity. A retainer is secured into the cavity internally of the O-ring, the retainer having a sloped peripheral edge squeezing the O-ring against the peripheral bearing surface. The O-ring is deformed to substantially fill the cavity between the peripheral bearing surface and the sloped peripheral edge. Moreover, a portion of the O-ring extends out of the cavity above the one face surface for forming a seal between the first and second face surfaces. The present invention thereby allows the use of commonly available, low cost O-rings in face sealing applications while avoiding the prior art tendency for the O-ring to dislodge.

On pages 6 and 7 of the June 2, 2005, amendment, applicant pointed out that instead of an O-ring that is deformed to substantially fill the cavity between the edge and the bearing surface, Wilson forms a sealing ring of successive, flatwise superposed, strongly compacted, united layers X of a material into a ring of stiff and of but slightly elastic character. It is preferably composed of asbestos rings and is only very slightly compressible. As a consequence, it substantially retains its form under pressure (column 2, lines 96-104). Therefore, the shape of sealing ring S shown in Wilson is determined by the beveling off of edges of the laminae (see column 3, lines 10-20) rather than any deformation caused by squeezing between a cavity wall and a retainer.

In the Response to Arguments accompanying the final rejection, it is argued that:

> The sealing ring S of Wilson is elastic and compressible. Therefore, it is deformed to certain extent to substantially fill the cavity when compressed as shown in the figure.

This basis of the rejection is contrary to the actual teaching of Wilson which states that the sealing ring substantially retains its form. Furthermore, the laminae of sealing ring S are clearly shaped to be conformal with recess 16 even before being clamped in

place by plate 22. Therefore, it is not any deformation that causes sealing ring S to substantially fill the cavity.

The rejection is also clearly in error in that Wilson does not show an O-ring. One skilled in the art considers an O-ring to be a toroidal elastomer having a substantially round cross section. For example, the online encyclopedia Wikipedia describes the O-ring, invented in 1936, as follows (http://en.wikipedia.org/wiki/O-ring):

> An **O-ring** is a loop of elastomer with a round (o-shaped) cross-section used as a mechanical seal. They are designed to be seated in a groove and compressed during assembly between two or more parts, creating a seal at the interface.
> O-rings are one of the most popular seals used in machine design because they are inexpensive and easy to make, reliable, and have simple mounting requirements.

A Yahoo search for "O-ring" turns up numerous catalogs for O-rings having many different dimensions in conformance with the standard definition given above. The present invention addresses the tendency of such an O-ring to be ejected from a groove by pressurized fluid entering the groove behind the O-ring which is only possible because an O-ring does not conform to the groove. Because Wilson fails to even show an O-ring, it cannot squeeze an O-ring or deform one.

II. Conclusion

The final rejection commits clear error in finding that an O-ring or the deformation of an O-ring to substantially fill a cavity are present in Wilson. Because these elements of all the claims are lacking, claims 1-19 are in condition for allowance. Favorable action is respectfully solicited.

Respectfully submitted,

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